REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

Claim 34 is requested to be cancelled. Claims 9 and 12 are currently being amended without prejudice. Withdrawn claims 22 and 32 are currently being amended without prejudice to correct typographical errors. Support for amendments can be found in the paragraph starting from page 9, line 20. No new matter is added.

After amending the claims as set forth above, claims 9-14, 18, 33 and 35 are now pending for examination. Claims 15-17, 19-22, 28-29 and 32 remain withdrawn.

Claim Rejections under 35 U. S. C. § 103

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Herchen et al. (US 5,819,434, hereinafter "Herchen"). Claims 10-14, 18 and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herchen in view of Nguyen (US 6,565,661, hereinafter "Nguyen"). Applicants respectfully traverse for at least the reasons that follow.

Independent claim 9 is amended to recite that "each of the plurality of ejection holes is configured in such a way that a diameter of the ejection hole, on the side where the gas flows out of the hole, is twice or less a plasma sheath thickness (d),

$$d = 1.307 \times \lambda_D \left[\frac{1}{2} \left\{ 1 + \ln\left(\frac{m_i}{2\pi m_e} \right) \right\} \right]^{\frac{3}{4}}$$

, wherein m_i and m_e represent a plasma ion mass and an electron mass, respectively, and

$$\lambda_D = \sqrt{\frac{\varepsilon_0 k T_e}{n_e e^2}}$$, wherein ϵ_0 represents a permittivity of free space, k a Boltzmann's constant, T_e an electron temperature, n_e a plasma electron density, and e a unit charge."

Herchen is directed to promote an even etch rate by improving stability of thermal equilibrium of a gas distribution plate (GDP) and eliminating a first wafer effect. (Herchen, Abstract) However, Herchen is silent that "each of the plurality of ejection holes is configured in such a way that a diameter of the ejection hole, on the side where the gas flows out of the hole, is twice or less a plasma sheath thickness...," as recited in claim 9.

Nguyen teaches a thick plate for high thermal conductance and variable size delivery hole for high flow conductance (Nguyen, Abstract). However, Nguyen is also silent that "each of the plurality of ejection holes is configured in such a way that a diameter of the ejection hole, on the side where the gas flows out of the hole, is twice or less a plasma sheath thickness...," as recited in claim 9.

Thus, Herchen and Nguyen, either alone or in combination, fail to teach all limitations of claim 9. Claims 10-11 and 33-34 depend from claim 9, and thus are patentable for at least the same reasons as claim 9.

Independent claim 12 recites all the limitations of claim 9, and thus are patentable for at least the same reasons as claim 9. Claims 13-14, 18 and 35 depend from claim 12, and thus are patentable for at least the same reasons as claim 12.

Conclusion

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date 10/13/2009 By _____

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